

# Comparisons of Job Characteristics

Focus Occupation: **Mathematicians (15-2021)**

Associated Occupation: **Actuaries (15-2011)**

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

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<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

## Knowledge

Similarity of Focus Occupation to Associated Occupation: 72

Focus Occupation: **Mathematicians (15-2021)**

Associated Occupation: **Actuaries (15-2011)**

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	9.2	24.8	25.0	0	Current knowledge level may be sufficient
Economics and Accounting	4.4	17.1	2.8	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	15.9	17.2	0	Current knowledge level may be sufficient
Administration and Management	8.4	12.3	4.0	<<	Extensive education and/or training may be required
Law and Government	5.9	10.8	2.6	<<	Extensive education and/or training may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Skills

Similarity of Focus Occupation to Associated Occupation: 78

Focus Occupation: **Mathematicians (15-2021)**

Associated Occupation: **Actuaries (15-2011)**

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	6.2	17.2	23.2	>>	Skill level is likely more than sufficient
Critical Thinking	10.8	16.4	16.0	0	Current skill level may be sufficient
Judgment and Decision Making	9.4	16.4	10.4	<<	Extensive development of skills in this area may be required
Complex Problem Solving	9.1	14.8	15.1	0	Current skill level may be sufficient
Systems Analysis	6.5	14.4	9.1	<<	Extensive development of skills in this area may be required
Systems Evaluation	6.4	14.4	6.7	<<	Extensive development of skills in this area may be required

Management of Financial Resources	3.3	10.3	1.8	<<	Extensive development of skills in this area may be required
Operations Analysis	5.0	10.1	6.6	<<	Extensive development of skills in this area may be required
Programming	2.2	6.7	6.2	0	Current skill level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Abilities		Similarity of Focus Occupation to Associated Occupation: 95			
Focus Occupation: Mathematicians (15-2021) Associated Occupation: Actuaries (15-2011)					
Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematical Reasoning	6.3	17.3	20.6	>	Current ability level is likely sufficient
Number Facility	6.3	17.0	15.5	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.5	15.7	0	Current ability level may be sufficient
Written Comprehension	11.0	15.2	16.4	0	Current ability level may be sufficient
Inductive Reasoning	10.2	14.5	14.4	0	Current ability level may be sufficient
Near Vision	11.1	14.1	12.1	<	Some improvement in abilities may be required
Information Ordering	9.9	12.6	14.7	>	Current ability level is likely sufficient
Category Flexibility	9.0	12.0	11.9	0	Current ability level may be sufficient
Selective Attention	8.7	11.1	8.6	<	Some improvement in abilities may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common		Similarity of Focus Occupation to Associated Occupation: 95
Focus Occupation: Mathematicians (15-2021) Associated Occupation: Actuaries (15-2011)		
Work Activities	Exclusivity of Activity	
Advise clients or customers	19	
Analyze scientific research data or investigative findings	27	
Analyze social or economic data	63	
Collect statistical data	47	
Communicate technical information	4	
Compile numerical or statistical data	38	
Create mathematical or statistical diagrams or charts	43	
Develop mathematical ideas or interpretations	85	
Develop mathematical simulation models	70	
Develop or maintain databases	30	

Develop tables depicting data	33
Explain complex mathematical information	30
Make presentations	13
Perform statistical modeling	76
Prepare reports	8
Prepare technical reports or related documentation	22
Provide expert testimony on research results	66
Use computers to enter, access or retrieve data	3
Use knowledge of investigation techniques	16
Use mathematical or statistical methods to identify or analyze problems	30
Use quantitative research methods	35
Use relational database software	26
Use spreadsheet software	18
Use word processing or desktop publishing software	17

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.

## Tools and Technologies that Both Occupations Have in Common

Similarity of Focus  
Occupation to Associated  
Occupation: 83

**Focus Occupation: Mathematicians (15-2021)**

**Associated Occupation: Actuaries (15-2011)**

Tools and Technologies	Exclusivity
Calculating machines and accessories	3
Computers	1
Content authoring and editing software	1
Data management and query software	1
Development software	4
Industry specific software	1
Information exchange software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O\*NET (Occupation Information Network) data.